

What is Claimed is:

1. A frequency offset detection processing system
2 including a TCXO (Temperature Compensated Crystal
3 Oscillator, Temperature Compensated X'tal Oscillator)
4 which generates a reference frequency, a demodulation
5 unit which demodulates a reception signal, a frequency
6 offset detection unit which detects a frequency offset
7 from a phase moving amount between symbols of adjacent
8 pilot signals, and an AFC (Auto Frequency Control)
9 control unit, wherein said AFC control unit comprises
10 a majority determination unit which determines
11 whether each of phase moving amount detection values by
12 a plurality of frequency offsets, which are detected for
13 a predetermined time and read out from said frequency
14 offset detection unit, is a positive value or a negative
15 value, and totalizes to determine which of the positive
16 values and the negative values are larger in number,
17 a detection value conversion unit which
18 converts the phase moving amount detection values read
19 out from said frequency offset detection unit in
20 accordance with a majority determination result from
21 said majority determination unit,
22 an averaging processing unit which executes
23 processing for adding the phase moving amount detection
24 values read out from said frequency offset detection
25 unit and converted by said detection value conversion

26 unit and dividing a sum by the number of added values,
27 a correction value calculation unit which
28 calculates a frequency offset from the phase moving
29 amounts after averaging processing by said averaging
30 processing unit, and
31 a TCXO control unit which corrects TCXO
32 control on the basis of the frequency offset calculated
33 by said correction value calculation unit.

2. A system according to claim 1, wherein in
2 converting the phase moving amount detection values,
3 when it is determined as the majority
4 determination result that the number of negative
5 detection values is smaller, said detection value
6 conversion unit converts the negative detection values
7 to $+360^\circ +$ negative detection values, and
8 when it is determined as the majority
9 determination result that the number of positive
10 detection values is smaller, said detection value
11 conversion unit converts the positive detection values
12 to $-360^\circ +$ positive detection values.

3. A frequency offset detection processing method
2 comprising:
3 the TCXO step of generating a reference
4 frequency;
5 the demodulation step of demodulating a

6 reception signal;
7 the frequency offset detection step of
8 detecting a frequency offset from a phase moving amount
9 between symbols of adjacent pilot signals;
10 the majority determination step of determining
11 whether each of phase moving amount detection values by
12 a plurality of frequency offsets, which are detected for
13 a predetermined time and read out in the frequency
14 offset detection step, is a positive value or a negative
15 value, and totalizing to determine which of the positive
16 values and the negative values are larger in number;
17 the detection value conversion step of
18 converting the phase moving amount detection values in
19 accordance with a majority determination result;
20 the averaging processing step of executing
21 processing for adding the phase moving amount detection
22 values by the plurality of frequency offsets after
23 conversion and dividing a sum by the number of added
24 values;
25 the correction value calculation step of
26 calculating a frequency offset from the phase moving
27 amounts after averaging processing; and
28 the TCXO control step of correcting TCXO
29 control on the basis of the calculated frequency offset.

4. A method according to claim 3, wherein the
2 detection value conversion step comprises the steps of

3 in converting the phase moving amount
4 detection values, when it is determined as the majority
5 determination result that the number of negative
6 detection values is smaller, converting the negative
7 detection values to $+360^\circ$ + negative detection values,
8 and

9 in converting the phase moving amount
10 detection values, when it is determined as the majority
11 determination result that the number of positive
12 detection values is smaller, converting the positive
13 detection values to -360° + positive detection values.